Leading Biosurveillance

BioSense

BioSense Spotlight

In a world filled with concerns about bioterrorism and emerging diseases, public health officials have increasingly used biosurveillance for rapid detection and monitoring. Electronic biosurveillance information is an invaluable tool for emergency planning, preparedness response, and overall public health decision-making.

BioSense, a national program developed by the Centers for Disease Control and Prevention (CDC), provides real-time biosurveillance and situational awareness through use of existing data from healthcare organizations. Because of its ability to provide real-time health data to local, state, and federal public healthcare entities, BioSense facilitates collaboration for critical public health response.

Part of the BioSense program includes funding to connect organizations, allowing their data to be sent into the BioSense system.

Aurora Healthcare

Aurora Healthcare, based in eastern Wisconsin, operates 14 hospitals and 103 clinics from Green Bay to the Illinois border. It is the largest healthcare provider in Wisconsin. Guided by the principle that, "there is a better way to provide healthcare," health administrators at Aurora quickly saw the benefits of adding BioSense to their array of biosurveillance products.

To date, 13 Aurora hospitals are participating in the BioSense program. BioSense's ability to feed Aurora data directly to the state department of health allows Wisconsin health officials to get a clear picture, quickly, of health issues potentially affecting the entire state.

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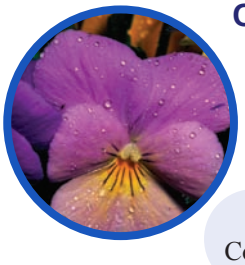

Cook County, Illinois

Cook County, with a population of roughly five million people spread over nearly 950 square miles, can quickly view and analyze data from 18 participating hospitals that transmit data four times daily to the Cook County Department of Public Health. The biosurveillance system currently in use in suburban Cook County is the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE). The establishment of an interface for the transfer of data from ESSENCE to BioSense affords participating hospitals in Cook County the benefit of situational awareness of disease incidence on a national scale. In addition, use of BioSense by county-owned hospitals located in the city of Chicago strengthens the collaborative relationship and communication between the county hospitals and local public health, which is important in any emergency situation.

During 2007, Cook County plans to link eight more hospitals to the group, totaling 26 hospitals participating in BioSense.

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State of Indiana

Indiana was the first statewide syndromic surveillance system to participate in the BioSense program. Covering some 36,291 square miles in over 92 counties and home to more than six million people, Indiana has found BioSense to be a useful tool for connecting local and state health departments to CDC, thereby enabling a quick response to possible disease outbreaks. To date, 70 hospital emergency departments from across the state send data to the Indiana State Department of Health, where the data are analyzed by epidemiologists using ESSENCE, the biosurveillance system currently used in Indiana.

State of Indiana *(continued)*

"BioSense is one of the tools we can use to help us quickly organize our response during outbreak investigations," said State Health Commissioner Judy Monroe, M.D. "We can be better prepared to manage public health emergencies by getting real-time health information."

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State of Ohio

Ohio recognized early the importance of biosurveillance to the healthcare of its residents. The state health department is using the Real Time Outbreak and Disease Surveillance System (RODS) to analyze emergency department registration data and monitor disease activity. Ohio's surveillance efforts included monitoring wildlife disease outbreaks and non-prescription sales of retail pharmacies, among other things, and saw BioSense as a way of contributing to the larger syndromic surveillance needs of the nation.

While Ohio was among the first to provide data from an existing syndromic surveillance system to BioSense, they were also the first statewide health department to receive a split feed of data from hospitals using the BioSense data integrator. In this way, Ohio has become the model for prospective participants wishing to utilize data from multiple systems in multiple platforms. According to Loren Shaffer, Early Event Supervisor for the Ohio Department of Health, researchers at the RODS Laboratory are looking for best practices in the use of this data for Ohio and other local health departments interested in split feeds of data from BioSense hospitals.

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Tarrant County, Texas

Tarrant County's 48 participating hospitals cover all of North Texas, not just Tarrant County. From Dallas to Fort Worth, Plano, Irving, and Arlington, data is sent from 12 counties which represent more than six million people. The data transmitted are analyzed by RODS and ESSENCE and now BioSense. The addition of BioSense gives Tarrant County a complimentary way to analyze rich data types and to further support their public health decision-making.

Bill Stephens, APC Manager of the National Association of City and County Health Officials project, has recognized the benefit of BioSense to Tarrant County, stating that its ability to track sub-syndromes "adds a great deal of public health utility." Additionally, Tarrant County Health Department officials were interested to note that anomalies picked up by BioSense in Cook Children's Healthcare System data were validated by the fact that the area had been hard hit by seasonal flu, especially among young children.

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For More Information

Visit www.cdc.gov/biosense